

## Lesson 2: Bible History—Real or Fiction?

*Videos: Radiometric Dating & Uniformitarianism*

### Lesson 2: The Big Picture

- Evolution theory teaches that millions of years of death and suffering created the life we have today (natural selection and random mutations).
- The Bible teaches that all life was spontaneously created by God in six days, and Biblical genealogies place Creation Week about 6,000 years ago.
- As the inspired Word of God, the Bible can be trusted in all areas, including the history of our world's beginnings.
- The Bible holds up when put through many historical tests, and Isaiah 53 provides amazing confirmed prophecies about Jesus.
- Evolution theory requires “deep time” as a foundation.
- The assumptions behind radiometric dating are unprovable and when tested, don't hold up to scrutiny.
- Many scientific dating methods show the Earth is young.

#### Overview

Evolution theory and the Bible present two very different views on the origin of life. While estimates have varied widely over the years, evolution theory holds that “life” (in the simplest forms) started about 3.8 billion years ago, about 750 million years after earth was formed.<sup>18</sup> Then, about 220 million years ago, the “age of dinosaurs” began and thrived

until about 65 million years ago when an asteroid demolished most life on earth. Lucky for us, a small, half-pound, insect-eating shrew-like animal (affectionately named Schrödinger) survived the catastrophe and lived to eventually start the human race by “lending its DNA to the huge branch of mammals known as placental mammals.”<sup>19</sup>

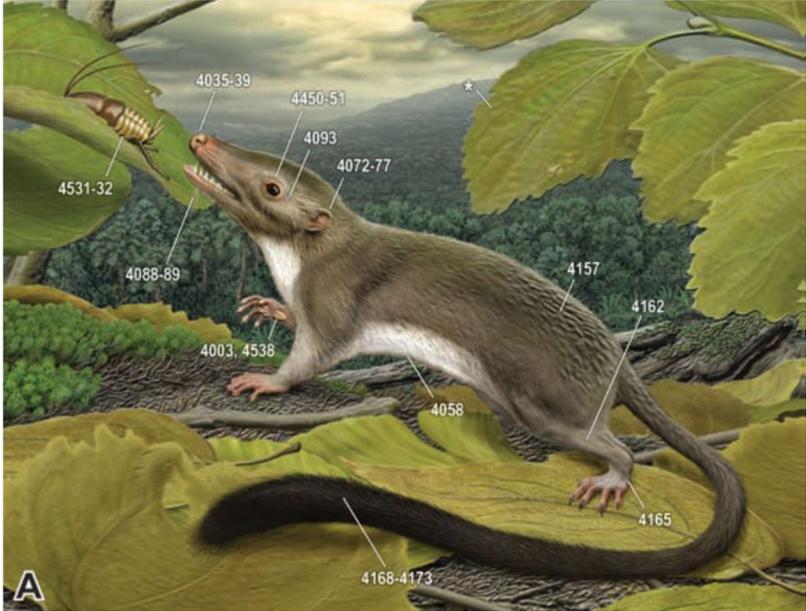


Figure 2. What humans supposedly evolved from: An artist's rendering of the hypothetical placental ancestor, a small insect-eating animal.<sup>20</sup>

To be fair, those unused to thinking about God find the Bible's account for the origin of life and the human race difficult to believe. But either creation or evolution histories require faith for everyone who adopts that view. Put simply, the Bible holds that an all-powerful God created all life on earth within a six-day period and created humans in His image out of the dust of the earth on the Sixth Day (Genesis 1). Following the genealogies in the first 11 chapters of Genesis that lead back to Adam places this miraculous Creation Week about 6,000

years ago. The chart below shows the timeline from Creation to about 2000 B.C. using the birth/death years of the patriarchs listed in the first 11 chapters of Genesis:

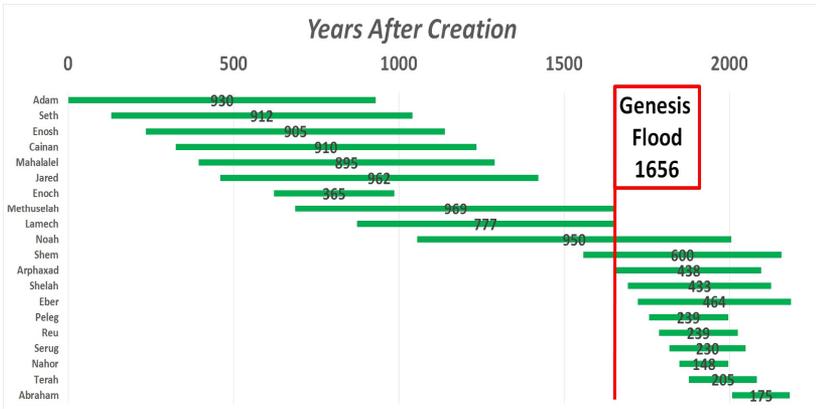


Figure 3. The First 20 Patriarchs since Creation

Notice that the lifespans of the pre-Flood patriarchs overlapped. Plus, their lifespans declined according to a logarithm common in population studies. These give us confidence that Genesis records an accurate timeline. Summing the time from Adam, the first man created on the Sixth Day of Creation Week, to Abraham is about 2,000 years, then from Abraham to the time of Christ is about another 2,000 years, then we have from Christ until now, another 2,000 years. So the straight chronology from the Bible has Creation about 6,000 years ago.

While this is difficult for many to believe, many Americans<sup>21</sup> (regardless of religious orientation) hold to a “recent” view of human origins, with 46% believing that God created humans in their present form less than 10,000 years ago.<sup>22</sup>

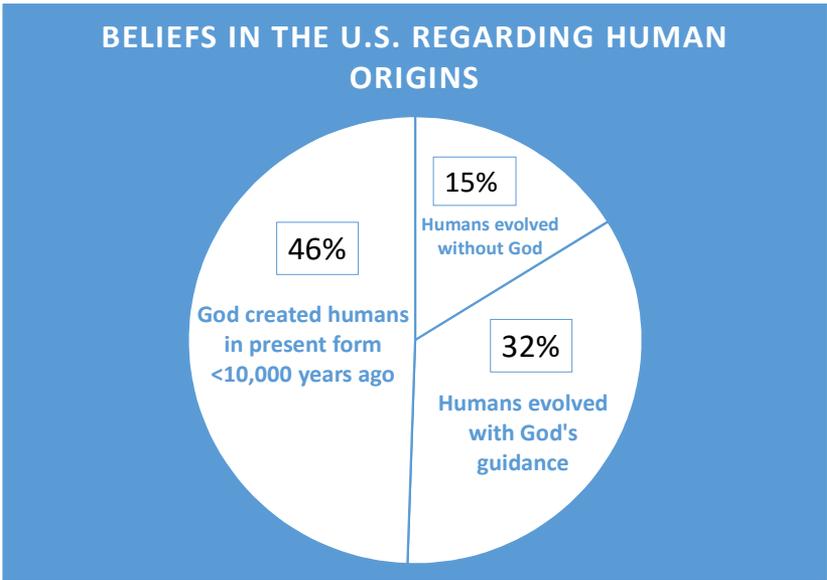


Figure 4. Beliefs in the U.S. Regarding Human Origins

The data from the chart above come from a survey conducted by the Gallup poll in 2014, and is based on telephone interviews conducted with a random sample of 1,028 adults in all 50 states. The results of the survey show that more than 4 in 10 Americans continue to believe that God created humans in their present form 10,000 years ago, a view that has changed little over the past three decades.

The earth being this “young” is difficult for many people to believe, but there is plenty of evidence that supports the position. Ministries like Answers in Genesis, the Institute for Creation Research, and Creation Ministries International have amassed mounds of evidence that shows how science backs the historical Genesis position.

However, it admittedly takes faith to believe in an earth that was created *either* 6,000 years ago or 4.5 billion years ago—because no humans were present to observe it! For Christians, this means that having trust in the Creation account written by God who was there during Creation Week is the only way to really know what happened and when. Christians who

hold to Biblical authority believe that the Bible was *written by God through man*. Thus, we believe the Bible to be true regarding all areas it speaks about—including history, the origin of the world, and the creation of the human race. We do not believe that God can lie (Numbers 23:19: “God is not a man, that he should lie; neither the son of man, that he should repent.” Titus 1:2: “In hope of eternal life, which God, that cannot lie, promised before the world began.” Hebrews 6:18: “It was impossible for God to lie.”). Even though man is imperfect, we believe that God wrote the Bible through man as they were directed by God: “All Scripture is inspired of God and beneficial for teaching, for reproving, for setting things straight, for disciplining in righteousness, that the man of God may be fully competent, completely equipped for every good work” (2 Timothy 3:16–17). Next we’ll take a look at whether the Bible itself can be trusted.

### **Can we Trust the Bible?**

Recent research has revealed a serious epidemic with today’s Christian youth. So many are caught up in an unfortunate pattern that goes something like this:<sup>23</sup>

1. They grow up in a Christian home and attend church regularly, but they don’t receive solid biblical teaching or training regarding various worldviews;
2. Their faith is challenged by evolutionary teaching when they attend public high school or college;
3. Their questions and doubts go unanswered because of their complacency, lack of interest, or the failure of parents and/or church leadership to equip them with biblical grounding and a solid awareness of various worldviews; and
4. They fall away from their faith, and their generational Christian line is lost.

Many teens today are in Step 1 above, some are in Steps 2–3, and some are recovering from Step 4. Fortunately, some have not entered the cycle above because of their biblical grounding. Whatever your current position, we encourage you to *slowly and steadily* take in the words of this Chapter—written about the most important book in history, the Bible.

## **Overview**

So many people ask: Who wrote the Bible? How was the Bible put together? How do we know the stories in the Bible actually happened? How do we know that it has been accurately translated over the years? These are all fair questions. To start answering some of these questions, we will begin by looking at the big picture, then follow with closer look.

The big picture begins with the Bible’s 66 books (39 books in the Old Testament and 27 books in the New Testament) which were written by over 40 different authors from various walks of life, including scholars, kings, priests, shepherds, farmers, physicians, tent-makers, fishermen, and philosophers. The first books of the Bible were compiled around 1450 B.C. and the last books before A.D. 90—a timespan of about 1,500 years. It was written in three languages: Hebrew, Aramaic, and Greek. The most important characteristic of the Bible—and one that makes it different than any other book ever published—is that it is inspired by God (2 Timothy 3:16–17 and 2 Peter 1:19–21).

Despite such a diverse background, the Bible is unlike any other book written in history in its historical accuracy, agreement with demonstrable science and archaeology, and consistency—both internally and externally. The Bible has been translated into over 2,000 languages, and ranks highest among the most widely printed and studied books in the world.

Let’s take a closer look into how the Bible was put together. The first 39 books of the Bible (the Old Testament) were solidified and used authoritatively in its complete form by the Hebrews well before Christ. The books of the New

Testament were written between about A.D. 30 and A.D. 90 and were formally “canonized” into the set of 27 books we have today sometime before the year A.D. 375. The word “canon” comes from the Greek word “kanon,” which means *measuring rod*. This word was used by those who officially verified an assembled set of 27 books because they stood up to the measuring tests of “divine inspiration and authority.”

What led to this final “canonization” process? Theology and history books have thousands of pages on this topic. So we’ll consider just a few highlights between the time the New Testament was *inspired* by God through original manuscripts men wrote and *assembled* into the “final canon”:<sup>24</sup>

- Paul regarded Luke’s writings to be as authoritative as the Old Testament (1 Timothy 5:18; see also Deuteronomy 25:4 and Luke 10:7).
- Peter recognized Paul’s writings as Scripture (2 Peter 3:15–16).
- Some of the books of the New Testament were being circulated among the churches (Colossians 4:16; 1 Thessalonians 5:27).
- Clement of Rome mentioned at least eight New Testament books (A.D. 95).
- The writings of Ignatius of Antioch acknowledged about seven New Testament books (A.D. 115).
- The writings of Polycarp, a disciple of John the Apostle, acknowledged 15 of the books (A.D. 108). Later, Irenaeus mentioned 21 New Testament books (A.D. 185).
- Hippolytus of Rome recognized 22 of them (A.D. 170–235).

Before the final set of 27 books was formally recognized, an earlier “canon” was compiled in A.D. 170. This Canon, called the Muratorian Canon, included all of the New Testament books except Hebrews, James, and 3 John. These

three books were already God-inspired even though the members of the Muratorian Canon may not have recognized them as so. In A.D. 363, the Council of Laodicea stated that only the Old Testament and the 27 books of the New Testament were to be read in the churches. The Council of Hippo (A.D. 393) and the Council of Carthage (A.D. 397) also affirmed the same 27 books as authoritative.

We owe these ancient councilmen. They sifted through false gospels and other writings that early deceivers claimed were God-inspired so that later generations of Christians could trust, study, know, teach and believe in the Scriptures. Some of the features they recognized in the canon were:

- Did the text describe mythological or pointless miracles, or genuine miracles which always accompanied and authorized a message—the Gospel.
- Did the people who lived through the events that the text describes reject those texts as being false, or accept them as having occurred as described?
- Did the text contain any logical or biblical contradictions? If so, it must not have come from the same Divine co-author, who is not a God of confusion, but of order—and who is passionate about clearly revealing who He is to as many as will listen; and
- Was the text written by an apostle or one authorized by an apostle?

After this “canonization” period, a definitive version of the Bible was recorded in Greek, called the *Codex Vaticanus* in about A.D. 350. The classic King James version, as well as the New King James, relied on the very important *Textus Receptus* copies of Scripture. The Codex is one of the oldest extant manuscripts of the Greek Bible (Old and New Testament), and has been kept in the Vatican Library since the 15th century. Another ancient Bible is the *Aleppo Codex*, which is a medieval bound manuscript of the Hebrew Bible written around A.D. 930. The first English translation of the Bible was made in A.D.

1382 by John Wycliffe and was the first book ever mass-produced on the printing press in A.D. 1454 by Johannes Gutenberg.<sup>25</sup>

Given this brief history of the Bible, let's put the Bible through some tests that historians use when analyzing the historical accuracy and reliability of ancient manuscripts. First, let's evaluate whether *what we have today matches what was written originally*. In the Bible's case, this was about 2,000 years ago and earlier. Second: *Do the recorded events describe true events?* Let's see how the Bible holds up to each of these important questions.

### ***Does the Bible We Have Today Match the Original?***

One of the primary ways to answer this important question is to look at the *time gap* between the original writing (called the *autograph*) and the copies that still exist today. As a general rule, the closer the copy is to the original, the greater the accuracy and reliability. Ancient manuscripts like the Bible were written on fragile material such as papyrus, which is a thin paper-like material made from papyrus plants. Because papyrus eventually decays or gets worn out, ancient writers would continually make new copies using this material and others.<sup>26</sup>

Dating these ancient texts is done by a variety of methods, such as analyzing the material on which it was written, letter size and form, punctuation, text divisions, ornamentation, the color of the ink, and the texture and color of the parchment.<sup>27</sup> Table 2 shows the results of this "test of time" for the Biblical New Testament compared to several other historical documents.

Table 2. How the New Testament Compares to Other Ancient Writings<sup>28</sup>

Author/Work	Date Written	Earliest Copies	Time Gap	Num. Copies
Homer (Iliad)	800 B.C.	400 B.C.	400 yrs.	643
Herodotus (History)	480–425 B.C.	A.D.900	1,350 yrs.	8
Thucydides (History)	460–400 B.C.	A.D.900	1,300 yrs.	8
Plato	400 B.C.	A.D. 900	1,300 yrs.	7
Demosthenes	300 B.C.	A.D. 1100	1,400 yrs.	200
Caesar (Gallic Wars)	100–44 B.C.	A.D. 900	1,000 yrs.	10
Tacitus (Annals)	A.D 100.	A.D. 1100	1,000 yrs.	20
Pliny (Natural)	A.D. 61–113	A.D. 850	750 yrs.	7
Secundus (History)				
New Testament (Fragment)	A.D. 50–100	A.D. 114	50 yrs.	5,366
New Testament (Books)		A.D. 200	100 yrs.	
New Testament (Most Content)		A.D. 250	150 yrs.	
New Testament (Complete)		A.D. 325	225 yrs.	

Table 2 reveals two important facts. First, the New Testament has many more original copies compared to several other famous pieces of literature (5,366 compared to only hundreds for other famous texts). Second, it reveals that the time span between the original and these copies is closer than almost any other work compared!

Answering the important question, “*Is the Bible we have today what was written down originally?*” requires evaluating the *number of manuscript copies* that were made of the original. Generally speaking, the greater number of copies of the original

available, the easier it is to reproduce the original. Taking the 5,366 copies of the New Testament and adding the copies from other languages (such as Latin, Ethiopic, and Slavic) results in more than 25,000 total manuscripts (hand-written copies) that pre-date the printing press in the 15<sup>th</sup> century! By comparison, the runner-up historical text (Homer's Iliad) has only 643.<sup>29</sup>

With this, the New Testament clearly passes both the *time gap* and the *number of manuscript copies* tests. And if the New Testament doesn't pass this test, one must certainly disregard most other historical texts as inaccurate and/or unreliable!

There is more.

Have you ever had a computer crash, resulting in a total loss of all your data? I have—it's definitely not fun! One of the most difficult challenges about computer crashes is losing the *original copies* of your important homework assignments or work reports. However, when I've experienced these situations, I'm usually able to completely reconstruct all of my important "final versions" through my *email files* because I sent copies of the final versions to friends and/or clients. This is the same situation with the original bible documents and the letter exchanges between the Church Fathers—we can completely reconstruct over 99% of the original Bible (New Testament) from just their letters!

Even if all of the copies of the Bible from A.D. 300 to today were destroyed, the complete New Testament (except for only 11 verses)<sup>30</sup> could be reconstructed using only quotations by the Early Church Fathers in the first few hundred years after Christ! This is because the Church Fathers frequently quoted large sections of Scripture in their letters to each other. In addition, if these Church Fathers quoted from the entire New Testament, then the New Testament had to have been widely circulating before this time—long enough to be regarded as reliable by the early church. This shows that the entire New Testament was already assembled and considered reliable within 50 years from the disciples.<sup>31</sup>

## *Is What Was Written in the Bible True?*

Three of the four Gospels, books that include the narrative of Jesus' life, were written by *direct eye witnesses* of the events in Jesus' life: Matthew, Mark, and John. Luke, when writing the story of Jesus' life for Theophilus, a high-ranking official at the time,<sup>32</sup> wrote: "Many have undertaken to draw up an account of the things that have been fulfilled among us, *just as they were handed down to us by those who from the first were eyewitnesses and servants of the word*" (Luke 1:1–2, emphasis added). Luke continues to state that he carefully vetted his account of Jesus' life and ministry: "With this in mind, since I myself have carefully investigated everything from the beginning, I too decided to write an orderly account for you, most excellent Theophilus, so that you may know the certainty of the things you have been taught" (Luke 1:3–4). Additional examples of this careful research and transcription include:

- 1 John 1:3: "We proclaim to you what we have seen and heard, so that you also may have fellowship with us. And our fellowship is with the Father and with his Son, Jesus Christ."
- 2 Peter 1:16: "For we did not follow cleverly devised stories when we told you about the coming of our Lord Jesus Christ in power, but we were eyewitnesses of his majesty."
- John 20:30–31: "Jesus performed many other signs in the presence of his disciples, which are not recorded in this book. But these are written that you may believe that Jesus is the Messiah, the Son of God, and that by believing you may have life in his name."

In addition, several of the writers of the New Testament did their writing and speaking among people who were present at the events of Jesus' life. For example, in Acts 2:22, Peter

stated while under interrogation, “Fellow Israelites, listen to this: Jesus of Nazareth was a man accredited by God to you by miracles, wonders and signs, which *God did among you through him, as you yourselves know*” (emphasis added). Paul used this reference to his audience’s common knowledge of Christ when he defended himself against Festus: “What I am saying is true and reasonable. *The king is familiar with these things*, and I can speak freely to him. I am convinced that none of this has escaped his notice, because it was not done in a corner” (Acts 26:25–26, emphasis added).

Furthermore, most of the writings of the New Testament were written during a time when the community knew about Jesus, Jesus’ followers, or knew of people who did. “For what I received I passed on to you as of first importance: that Christ died for our sins according to the Scriptures, that he was buried, that he was raised on the third day according to the Scriptures, and that he appeared to Cephas, and then to the Twelve. After that, he appeared to more than five hundred of the brothers and sisters at the same time, most of whom are still living, though some have fallen asleep” (1 Corinthians 15:3–6, emphasis added).

Finally, consider the fact that 11 of the 12 disciples died terrible deaths—being killed for their unchanging testimony of who Christ was, and of His resurrection. They were so sure that Christ was who He claimed to be that they signed their testimony with their own blood!

### ***Isaiah 53 and the Dead Sea Scrolls***

In 1947, shepherds chasing a lost sheep in the caves above the Qumran Valley northwest of the Dead Sea made one of the most significant archaeological discoveries of our time—the Dead Sea Scrolls. The scrolls were found in numerous clay jars, and numbered over 900, 200 of which include numerous sections and fragments of every book in the Old Testament except the book of Esther. Though few of its scholars dare

admit it, they even contain fragments of several New Testament books.<sup>33</sup>

One of the most significant scrolls is called the “Great Isaiah Scroll,” which includes the same Book of Isaiah that we have today in modern bibles, but dates to 125 B.C.<sup>34</sup> The Great Isaiah Scroll is significant for two reasons. First, it was written before the Lord Jesus Christ was yet born and it includes a chapter (Chapter 53) which includes specific and clear prophecies about the torture, death, burial, and resurrection of Christ. Second, its discovery now allows us to test three versions of the Bible representing different time periods: Pre-Christ Dead Sea Scroll, A.D. 930, and today. We can even compare how the English translation of this important text survived or changed through the years!

Table 3 provides a word-by-word comparison of these three versions so you can see for yourself how reliable the translation process has been through the millennia:

Table 3. Comparison of Isaiah 53 between the Dead Sea Scrolls, the Aleppo Codex, and the Modern Bible <sup>35</sup>

Verse	Dead Sea "Great Isaiah" Scroll (125 B.C.)	Aleppo Codex (A.D. 930)	Modern Translation (NIV)
1	Who has believed our report and the arm of YHWH <sup>(1)</sup> to whom has it been revealed?	Who would have believed our report? And to whom hath the arm of the LORD been revealed?	Who has believed our message and to whom has the arm of the LORD been revealed?
2	And he shall come up like a suckling before us and as a root from dry ground there is no form to him and no beauty to him and in his being seen and there is no appearance that we should desire him.	For he shot up right forth as a sapling, and as a root out of a dry ground; he had no form nor comeliness that we should look upon him, nor beauty that we should delight in him.	He grew up before him like a tender shoot, and like a root out of dry ground. He had no beauty or majesty to attract us to him, nothing in his appearance that we should desire him.
3	He is despised and rejected of men, a man of sorrows and knowing grief and as though hiding faces from him he was despised and we did not esteem him.	He was despised, and forsaken of men, a man of pains, and acquainted with disease, and as one from whom men hide their face: he was despised, and we esteemed him not.	He was despised and rejected by men, a man of sorrows, and familiar with suffering. Like one from whom men hide their faces he was despised, and we esteemed him not.
4	Surely our griefs he is bearing and our sorrows he carried them and we esteemed him beaten and struck by God and afflicted.	Surely our diseases he did bear, and our pains he carried; whereas we did esteem him stricken, smitten of God, and afflicted.	Surely he took up our infirmities and carried our sorrows, yet we considered him stricken by God, smitten by him, and afflicted.
5	and he is wounded for our transgressions, and crushed for our iniquities, the correction of our peace was upon him and by his wounds he has healed us. <sup>(2)</sup>	But he was wounded because of our transgressions, he was crushed because of our iniquities: the chastisement of our welfare was upon him, and with his stripes we were healed.	But he was pierced for our transgressions, he was crushed for our iniquities; the punishment that brought us peace was upon him, and by his wounds we are healed.
6	All of us like sheep have wandered each man to his own way we have turned and YHWH has caused to light on him the iniquity of all of us.	All we like sheep did go astray, we turned every one to his own way; and the LORD hath made to light on him the iniquity of us all.	We all, like sheep, have gone astray, each of us has turned to his own way; and the LORD has laid on him the iniquity of us all.
7	He was oppressed and he was afflicted and he did not open his mouth, as a lamb to the slaughter he is brought and as a ewe before her shearers is made dumb he did not open his mouth.	He was oppressed, though he humbled himself and opened not his mouth; as a lamb that is led to the slaughter, and as a sheep that before her shearers is dumb; yea, he opened not his mouth.	He was oppressed and afflicted, yet he did not open his mouth; he was led like a lamb to the slaughter, and as a sheep before her shearers is silent, so he did not open his mouth.

8	From prison and from judgment he was taken and his generation who shall discuss it because he was cut off from the land of the living. Because from the transgressions of his people a wound was to him	By oppression and judgment he was taken away, and with his generation who did reason? for he was cut off out of the land of the living, for the transgression of my people to whom the stroke was due.	By oppression and judgment he was taken away. And who can speak of his descendants? For he was cut off from the land of the living; for the transgression of my people he was stricken.
9	And they gave wicked ones to be his grave and <sup>(3)</sup> rich ones in his death although he worked no violence neither deceit in his mouth.	And they made his grave with the wicked, and with the rich his tomb; although he had done no violence, neither was any deceit in his mouth.	He was assigned a grave with the wicked, and with the rich in his death, though he had done no violence, nor was any deceit in his mouth.
10	And YHWH was pleased to crush him and He has caused him grief. If you will appoint his soul a sin offering he will see his seed and he will lengthen his days and the pleasure of YHWH in his hand will advance.	Yet it pleased the LORD to crush him by disease; to see if his soul would offer itself in restitution, that he might see his seed, prolong his days, and that the purpose of the LORD might prosper by his hand:	Yet it was the LORD's will to crush him and cause him to suffer, and though the LORD makes his life a guilt offering, he will see his offspring and prolong his days, and the will of the LORD will prosper in his hand.
11	Of the toil of his soul he shall see {+light+} and he shall be satisfied and by his knowledge shall he make righteous even my righteous servant for many and their iniquities he will bear.	Of the travail of his soul he shall see to the full, even My servant, who by his knowledge did justify the Righteous One to the many, and their iniquities he did bear.	After the suffering of his soul, he will see the light [of life] and be satisfied; by his knowledge my righteous servant will justify many, and he will bear their iniquities.
12	Therefore I will apportion to him among the great ones and with the mighty ones he shall divide the spoil because he laid bare to death his soul and with the transgressors he was numbered, and he, the sins of many, he bore, and for their transgressions he entreated.	Therefore will I divide him a portion among the great, and he shall divide the spoil with the mighty; because he bared his soul unto death, and was numbered with the transgressors; yet he bore the sin of many, and made intercession for the transgressors.	Therefore I will give him a portion among the great, and he will divide the spoils with the strong, because he poured out his life unto death, and was numbered with the transgressors. For he bore the sin of many, and made intercession for the transgressors.
Notes: (1) The tetragrammaton (YHWH) is one of the names of the God of Israel used in the Hebrew Bible. (2) There is a scribal thumb print over lines 10 to 12 in the Dead Sea "Isaiah" Scroll (lines 10–12 include verses 5–7 in modern Bibles). However, while this obscures some letters, all letters are "reconstructible with certainty" (see: <a href="http://www.ao.net/~fmoeller/qum-44.htm">http://www.ao.net/~fmoeller/qum-44.htm</a> ); (3) a scribbled word probably accusative sign "eth."			

Reading the three columns in Table 3 shows an incredibly high degree of similarity. In fact, regarding this

specific Chapter in Isaiah, renowned Christian philosopher and apologist Norman Geisler writes:

Of the 166 words in Isaiah 53, there are only 17 letters in question. Ten of these letters are simply a matter of spelling, which does not affect the sense. Four more letters are minor stylistic changes, such as conjunctions. The remaining three letters comprise the word “light” which is added in verse 11, and does not affect the meaning greatly. Furthermore, this word is supported by the Septuagint and IQ Is [first cave of Qumran, Isaiah scroll]. Thus, in one chapter of 166 words, there is only one word (three letters) in question after a thousand years of transmission—and this word does not significantly change the meaning of the passage.<sup>36</sup>

How is this possible? How can these three different documents—being translated and transcribed over a 2,000 year timeframe—have such *exact* similarity? One explanation is simply that God watched over the process. Practically speaking, he used many incredible scribes to do it. For example, the Talmudists (Hebrew scribes and scholars between A.D. 100 and A.D. 500) had an incredibly rigorous system for transcribing biblical scrolls. Samuel Davidson describes some of the disciplines of the Talmudists in regard to the Scriptures:<sup>37</sup>

A synagogue roll must be written on the skins of clean animals, prepared for the particular use of the synagogue by a Jew. These must be fastened together with strings taken from clean animals. Every skin must contain a certain number of columns, equal throughout the entire codex. The length of each column must not extend over less than 48 or more than 60 lines; And the breadth

must consist of thirty letters. The whole copy must be first-lined; And if three words be written without a line, it is worthless. The ink should be black, neither red, green, nor any other color, and be prepared according to a definite recipe. An authentic copy must be the exemplar, from which the transcriber ought not in the least deviate. No word or letter, not even a yod, must be written from memory, the scribe not having looked at the codex before him... Between every consonant the space of a hair or thread must intervene; Between every new parashah, or section, the breadth of nine consonants; Between every book, three lines. The fifth book of Moses must terminate exactly with a line; But the rest need not do so. Besides this, the copyist must sit in full Jewish dress, wash his whole body, not begin to write the name of God with a pen newly dipped in ink, and should a king address him while writing that name, he must take no notice of him.

Why is Isaiah 53 so important to Christians? Because Isaiah 53 includes at least 12 highly specific prophecies regarding the life, death, and resurrection of Christ. The details in this chapter would not be nearly as important if they were written after Christ's birth, but the fact that we can confirm that the chapter was in fact written before Christ proves beyond reasonable doubt both the accuracy and Divine authorship of the Bible. Consider these 13 prophecies, written by Isaiah about 700 years before Christ was even born, alongside references of their New Testament fulfillments:

1. He would not be widely believed (John 1:10–12).
2. He would not have the look of Majesty (Luke 2:7).
3. He would be despised and suffer (Matthew 26:67–68; 27:39–43).

4. He would be concerned about health needs (Matthew 8:17) and would die for our sins (1 Peter 2:24).
5. His pain/punishment would be for us (Matthew 28:20; Romans 4:25).
6. All of us have sinned (Romans 3:10–18).
7. He would not respond to charges (Matthew 26:63).
8. He was to be oppressed and killed (Matthew 26:65–68).
9. He was associated with criminals during life and at death (Matthew 27:38; 27:57–60).
10. He would be buried in a rich man’s tomb (Isaiah 53:9).
11. He would be crushed, suffer and die, yet live (Luke 23:44–48; Luke 24:36–44).
12. He would bear our sins (1 Peter 2:24).
13. He would have a portion with the great (Philippians 2:8–11).

The very fact that it has now been confirmed that this was written before Christ is amazing. How could anyone fulfill each of these prophecies, many of which happened after Christ’s death and were clearly out of His control (i.e., if he wasn’t God)? Finally, consider these prophecies about Christ that were all penned before He was born, and their fulfillments:<sup>38</sup>

Table 4. Forty-three (43) Prophecies Fulfilled by Jesus

<b>Prophecies About Jesus</b>	<b>Old Test. Scripture</b>	<b>New Testament Fulfillment</b>
Messiah would be born in Bethlehem.	Micah 5:2	Matthew 2:1; Luke 2:4–6
Messiah would be born of a virgin.	Isaiah 7:14	Mt. 1:22–23; Luke 1:26-31
Messiah would come from the line of Abraham.	Gen. 12:3; Gen. 22:18	Matthew 1:1; Romans 9:5
Messiah would be a descendant of Isaac.	Gen. 17:19; Gen. 21:12	Luke 3:34
Messiah would be a descendant of Jacob.	Numbers 24:17	Matthew 1:2
Messiah would come from the tribe of Judah.	Genesis 49:10	Luke 3:33; Hebrews 7:14
Messiah would be heir to King David's throne.	2 Sam. 7:12-13; Isa. 9:7	Luke 1:32–33; Romans 1:3
Messiah's throne will be anointed and eternal.	Ps. 45:6-7; Daniel 2:44	Luke 1:33; Hebrews 1:8–12
Messiah would be called Immanuel.	Isaiah 7:14	Matthew 1:23
Messiah would spend a season in Egypt.	Hosea 11:1	Matthew 2:14–15
Children would be massacred at Messiah's birthplace.	Jeremiah 31:15	Matthew 2:16–18
A messenger would prepare the way for Messiah.	Isaiah 40:3-5	Luke 3:3–6
Messiah would be rejected by his own people.	Psalms 69:8; Isaiah 53:3	John 1:11; John 7:5
Messiah would be a prophet.	Deuteronomy	Acts 3:20–22
Messiah would be preceded by Elijah.	Malachi 4:5-6	Matthew 11:13–14
Messiah would be declared the Son of God.	Psalms 2:7	Matthew 3:16–17
Messiah would be called a Nazarene.	Isaiah 11:1	Matthew 2:23
Messiah would bring light to Galilee.	Isaiah 9:1-2	Matthew 4:13–16
Messiah would speak in parables.	Ps. 78:2-4; Is. 6:90	Matthew 13:10-15,34–35
Messiah would be sent to heal the brokenhearted.	Isaiah 61:1-2	Luke 4:18–19
Messiah would be a priest after Melchizedek order.	Psalms 110:4	Hebrews 5:5–6
Messiah would be called King.	Ps. 2:6; Zechariah 9:9	Matthew 27:37; Mark 11:7–11
Messiah would be praised by little children.	Psalms 8:2	Matthew 21:16
Messiah would be betrayed.	Ps. 41:9; Zech. 11:12-13	Luke 22:47; Mt:14–16
Messiah's betrayal money used to buy a potter's field.	Zechariah 11:12-13	Matthew 27:9–10
Messiah would be falsely accused.	Psalms 35:11	Mark 14:57–58

Messiah would be silent before his accusers.	Isaiah 53:7	Mark 15:4-5
Messiah would be spat upon and struck.	Isaiah 50:6	Matthew 26:67
Messiah would be hated without cause.	Ps. 35:19; Psalm 69:4	John 15:24-25
Messiah would be crucified with criminals.	Isaiah 53:12	Matthew 27:38; Mark 15:27-28
Messiah would be given vinegar to drink.	Psalm 69:21	Matthew 27:34; John 19:28-30
Messiah's hands and feet would be pierced.	Ps. 22:16; Zech. 12:10	John 20:25-27
Messiah would be mocked and ridiculed.	Psalm 22:7-8	Luke 23:35
Soldiers would gamble for Messiah's garments.	Psalm 22:18	Luke 23:34; Matthew 27:35-36
Messiah's bones would not be broken.	Exodus 12:46;	John 19:33-36
Messiah would be forsaken by God.	Psalm 22:1	Matthew 27:46
Messiah would pray for his enemies.	Psalm 109:4	Luke 23:34
Soldiers would pierce Messiah's side.	Zechariah 12:10	John 19:34
Messiah would be buried with the rich.	Isaiah 53:9	Matthew 27:57-60
Messiah would resurrect from the dead.	Ps. 16:10; Ps. 49:15	Matthew 28:2-7; Acts 2:22-32
Messiah would ascend to heaven.	Psalm 24:7-10	Mark 16:19; Luke 24:51
Messiah would be seated at God's right hand.	Ps. 68:18; Ps. 110:1	Mark 16:19; Matthew 22:44
Messiah would be a sacrifice for sin.	Isaiah 53:5-12	Romans 5:6-8

## The Age of the Earth, Dating Methods, and Evolution

Roger Sigler, M.S.

This section is important because an “ancient Earth” is foundational to evolutionary theory. As one high school biology textbook states: “Evolution takes a long time. If life has evolved, then Earth must be very old...Geologists now use radioactivity to establish the age of certain rocks and fossils. This kind of data could have shown that the Earth is young. If that had happened, *Darwin’s ideas would have been refuted and abandoned*. Instead, radioactive dating indicates that Earth is about 4.5 billion years old—plenty of time for evolution and natural selection to take place”<sup>39</sup> (emphasis added).

Thus, biology and earth science textbooks today will admit that “billions” (for the Earth) and “millions” (for life on Earth) of years are necessary for evolutionary theory to hold up. These books use these “ancient” dating ideas to assert that fossils are proof of biological evolution. What we will find out in this section, however, is that the age of God’s Creation is younger than these textbooks state, and that the dating methods used to establish the “old Earth” are flawed in many respects.

### ***Overview***

Fossil remains are found in sedimentary rock layers. Layers of sediment are formed when various size particles (e.g., dirt, rocks, and vegetation) accumulate in places such as deserts, rivers, lakes, and the ocean. Most texts teach that it takes a long time for these sediments to build up, with older layers buried beneath younger layers. Fossils found in lower layers are deemed to be older than those in the upper layers, older on the bottom younger on the top. This is called relative age dating. To help establish the relative ages of rock layers and their fossils, evolutionary scientists use *index fossils*.

Index fossils are distinct fossils, usually an extinct organism, used to establish and correlate the relative ages of rock layers. Index fossils have a short stratigraphic or vertical range, which means they are found in only a few layers, though in many widespread places—at least that’s the theory. In reality, many index fossils occur outside their expected ranges. Evolutionists assume that the creature evolved somehow, lived for a certain time period, and then died out. Textbooks are correct when they state that relative dating provides no information whatsoever about a fossil’s absolute age. Nevertheless, most textbook writers and the scientists they cite all grew up with a belief in uniformitarian geologic processes. The principle of uniformity is a philosophy and an assumption that the slow geologic processes going on today is how the deposits of the past happened, or that the present is the key to the past. This assumption works well enough only for recent

deposits such as the Quaternary and certain formations in the Tertiary Systems (see Figure 5). However, if you really want to learn, keen observations in the field testify that the sediments comprising the ancient rock layers were laid down catastrophically.

What you are not being told is that many sedimentary deposits from the many layers containing fossils contain clear evidence of mostly marine, very extensive, and very fast or catastrophic depositional processes. Fossils in pristine condition require that the animal or plant was buried rapidly. Therefore, index fossils, rather than indicating a living environment over time, represent nothing more than creatures buried quickly and suffocated under huge amounts of ocean-related sediments. Another feature is that these widespread oceanic deposits occur hundreds and even thousands of miles inland from the ocean. Furthermore, these marine sediments sit above granite and related rocks. Granite, by its very nature, floats so as to be a foundation for land, not the ocean.

Today, the geologic time scale shows ages based on radiometric age dating. Many textbook authors, consider radiometric ages as absolute ages. However, as you will soon learn, these techniques stray far from absolute dates, though they may reveal relative ages of some rocks. By reading this section you will learn the truth and know more about the evidences for a young Earth than most adults. You will discover why the land, sea, and air are young; how dinosaur bones and other fresh fossils are young; and why diamonds belched from the bowels of the Earth were made fast and are young, even though all of these things originated as living things on the Earth's surface! So let's get started.

### ***The Age of the Earth***

Today's evolutionists base their alleged age of the Earth on an interpretation of radioactive elements. They give the age of 4.5 billion years and the various rock layers are given names with assigned ages (Figure 5). The names help, but these ages

are far from absolute. To understand exactly why, we must first learn the basics of radioactive elements, and of the techniques used when treating these systems of elements as clocks.

The ages of the geologic rock systems shown in Figure 5 are based primarily on misinterpreted radioactive isotopes. Those who believe these ever-changing but always unimaginably old age assignments call each rock system a “period.”

Many elements on the periodic table have radioactive forms. Stable atoms have a set number of protons, neutrons, and orbital electrons. Isotopes are atoms of the same elements with the same number of protons but different numbers of neutrons. Some isotopes are radioactive and others are stable. A radioactive nucleus is not stable and will change or transmute into another element over time by emitting particles and/or radiation.

EON	ERA	PERIOD	EPOCH	Alleged Age Years	Young Earth Evidences
Phanerozoic This is where most fossils occur	Cenozoic	Quaternary	Holocene	10,000	Soft Frog with bloody bone marrow Salamander muscle Young coal, Penguin leathers, Lizard skin Young Diamonds Young Coal Dinosaur DNA, blood, blood vessels and protein
			Pleistocene	2,600,000	
		Tertiary	Pliocene	5,300,000	
			Miocene	23,000,000	
			Oligocene	30,900,000	
			Eocene	55,800,000	
	Mesozoic	Cretaceous	Paleocene	65,500,000	
				145,500,000	
				201,600,000	
	Paleozoic	Triassic		251,000,000	
				299,000,000	
		Permian		299,000,000	
				318,000,000	
		Pennsylvanian		318,000,000	
			359,000,000		
			416,000,000		
			444,000,000		
Silurian		444,000,000			
		488,000,000			
		488,000,000			
		542,000,000			
Cambrian		542,000,000			
		542,000,000			
Precambrian	Proterozoic Eon			542,000,000	Helium in zircon crystals
	Archean Eon			2,500,000,000	
				3,850,000,000	

Figure 5. Uniformitarian Geologic Time Scale (with problems noted). The time scale is placed vertically because older sedimentary deposits are buried beneath younger sedimentary deposits. The assumption of slow geologic processes and radiometric age dating has drastically inflated the age of the Earth and its strata.

A basic way to express the rate of radioactive decay is called the half-life. This equals the length of time needed for 50% of a quantity of radioactive material to decay. Unstable radioactive isotopes called parent elements decay into (or give birth to) stable elements called daughter elements. Each radioactive element has its own specific half-life (see Table 5).

Table 5: Radiometric Isotopes and Half Lives

Examples of Radioactive Isotopes that Change into Stable Elements		
Radioactive Parent Element	Stable Daughter Element	Half-Life
Carbon-14 ( $^{14}\text{C}$ )	Nitrogen-14 ( $^{14}\text{N}$ )	5,730 Years
Potassium-40 ( $^{40}\text{K}$ )	Argon-40 ( $^{40}\text{Ar}$ )	1.3 Billion Years
Uranium-238 ( $^{238}\text{U}$ )	Lead-206 ( $^{206}\text{Pb}$ )	4.5 Billion Years
Rubidium-87 ( $^{87}\text{Rb}$ )	Strontium-87 ( $^{87}\text{Sr}$ )	48.6 Billion Years

Note: Carbon-14 is not used to date minerals or rocks, but is used for organic remains that contain carbon, such as wood, bone, or shells.

To estimate a radioisotope age of a crystalline rock, geologists measure the ratio between radioactive parent and stable daughter products in the rock or in particular minerals of the rock. They then use a model to convert the measured ratio into an age estimate. Could errors have crept into those models?

Igneous rocks—those that have formed from molten magma or lava—are the primary rock types analyzed to determine radiometric ages. For example, let's assume that when an igneous rock solidified, a certain mineral in it contained 1000 atoms of radioactive potassium ( $^{40}\text{K}$ ) and zero atoms of argon ( $^{40}\text{Ar}$ ). After one half-life of 1.3 billion years, the rock would contain 500  $^{40}\text{K}$  and 500  $^{40}\text{Ar}$  atoms, since 50% has decayed. This is a 500:500 or 500- parent/500-daughter ratio, which reduces to a 1:1 ratio. If this was the case, then the rock would be declared to be 1.3 billion years old. If the ratio is greater than 1/1, then not even one half-life has expired, so the rock would be younger. However, if the ratio is less than 1/1, then the rock is considered older than the half-life for that system.

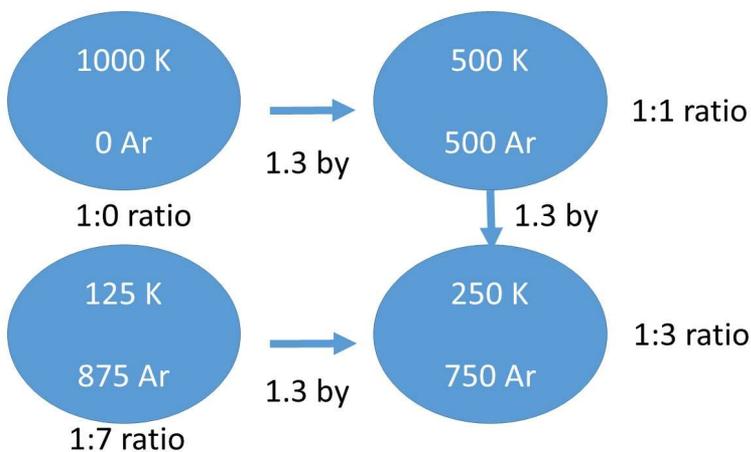


Figure 6. Decay of Radioactive potassium-40 to argon-40. “By” means “billions of years,” K is potassium, Ar is argon. After three half-lives of this system, totaling 3.9 billion years, only 125 of the original set of 1000 radioactive potassium-40 atoms remain, assuming that the system has decayed evenly for all that time.

Age-dating a rock requires at least these four basic assumptions:

1. Laboratory measurements that have no human error or misjudgments;
2. The rock began with zero daughter element atoms;
3. The rock maintained a “closed system;” (defined below) and
4. The decay rate remained constant.

Let’s describe each of these. Measuring the radioactive parent and stable daughter elements to obtain the ratio between them must be accurate, and it usually is. Keep in mind that most laboratory technicians have been trained in a belief of an old Earth, which may set preconceived ideas about the time periods they expect. They all memorized the typical geologic time scale

before they approached their research, and thus may not have an open mind to the idea that the accurately measured isotope ratios may have come from processes other than radioisotope decay.

Next, this technician assumes that all the radioactive parent isotopes began decaying right when the mineral crystallized from a melt. He also assumes none of the stable daughter element was present at this time. How can anyone claim to know the mineral really began with 100% radioactive parent and 0% daughter elements? What if some stable daughter element was already present when the rock formed? In fact, geologic literature reveals countless instances when experts explain away unexpected radioisotope age results using the excuse that daughter or parent isotopes must have been present when the rock formed. If so, then those isotopes can indicate nothing of a rock's age.

A closed system means that no extra parent or daughter elements have been added or removed throughout the history of the rock. Have you ever seen an atom? Of course not. It is microscopic, but we must think about this assumption on an atomic level. For example, decay byproducts like argon and helium are both gases. Neither gas tends to attach to any other atom, meaning they are rarely involved in chemical reactions. Instead of reacting with atoms in rock crystals, they build up in rock systems and can move in and out of the rocks. In fact, a leading expert in isotope geology states that most minerals do not even form in closed systems. He emphasizes that for a radioactive-determined date to be true, the mineral must be in a closed system.<sup>40</sup> Is there any such thing as a closed system when speaking of rocks?

The constant-decay rate assumption involves the decay rate remaining the same throughout the history of the rock. Lab experiments have shown that most changes in temperature, pressure, and the chemical environment have very little effect on decay rates. These experiments have led researchers to have great confidence that this is a reasonable assumption, but it may not hold true. Is the following quote an overstatement of known

science? “Radioactive transmutations must have gone on at the present rates under all the conditions that have existed on Earth in the geologic past.”<sup>41</sup> Some scientists have found incredible evidence in zircon minerals showing that radioactive decay rates were much higher in the past, as discussed below.

Consider a burning candle sitting on the table. How long has that candle been burning? This can be calculated if the candle’s *burn rate* and *original length* is known. However, if the original length is not known, or if it cannot be verified that the burning rate has been constant, it is impossible to tell for sure how long the candle was burning. A similar problem occurs with radiometric dating of rocks. Since the initial physical state of the rock is unknowable, the age can only be estimated according to certain assumptions.”<sup>42</sup>

### ***Helium and Accelerated Decay Rate***

Technicians measure the amount of radioactive uranium-238 and the amount of stable lead-206 within a given crystal to estimate the amount of radiometric decay that has happened in igneous rocks like granite. Decaying uranium-238 forms eight helium atoms on its way to becoming lead-206. The helium atoms are temporarily trapped within the zircon crystal, which is considered about as closed a system as possible in the world of minerals. However, helium atoms leak out of solids and into the atmosphere by passing through microscopic cracks in minerals, or by diffusing right through the spaces in the crystal’s net-like atomic arrangement. Think of a crystalline atomic lattice as a cage made of chain-link fencing. Dogs remain trapped in the cage, but squirrels can pass through the spaces. Helium atoms are like the small animals. They can squeeze through the spaces of the atomic lattice. Have you ever wondered why those helium balloons given at parties do not stay afloat for very long? Helium atoms leak through the rubber.

In the 1970s, Los Alamos National Laboratories collected core samples of the Jemez granodiorite. It is considered a Precambrian granitic rock and bears an assigned

age of 1.5 billion years based on uranium-238 – lead-206 dating. An internationally renowned laboratory then measured the rate of helium that leaks out or diffuses through the granodiorite. By dividing the amount of helium left in the rock with the measured diffusion rate of helium through the zircon crystals and other nearby minerals (e.g., mica), researchers can measure how long ago the radioactive decay happened—as long as they make the required assumptions. In concept, one could measure the age of a helium balloon by knowing the amount of helium left in it and dividing by the rate at which the helium left the balloon. Amazingly, the radiometric decay that generated the helium within these zircon crystals had to have happened within the last 6000 +/-2000 years. No known mechanism could have forced the helium to remain within these rocks for a longer period of time.

So here is the great mystery: One clock uses the decay of parent isotope uranium-238 into two daughter products: lead-206 and helium. The other clock uses the rate that helium diffuses through the mineral zircon. Since helium is therefore tightly coupled to the U-238 to Pb-206 decay process, no old-earth believer expected to find much helium in the rock believed to be 1.5 billion years old. However, the high concentrations of helium in the zircons show that the helium production time period must have been short and the nuclear decay process must therefore have been many times faster than today's apparently steady rate. This would also explain why there just simply is not enough radioactively-produced helium in the atmosphere to account for billions of years of decay.

### *Helium in the Atmosphere*

Some of the helium produced from the U-238 – Pb-206 decay process enters the atmosphere from the Earth's crust. It quickly rises through the lower atmosphere like letting go of a helium-filled party balloon. The estimated rate is 2,000,000 atoms/cm<sup>2</sup>/second. But forces such as gravity, escape velocity, and changes in temperature and density in the upper atmosphere

significantly reduce the rate that helium atoms can escape into outer space. The amount of helium that escapes into outer space is estimated to be only 50,000 atoms/cm<sup>2</sup>/second. If the Earth’s atmosphere had zero helium when it was formed, then today’s measured amount of 1.1 x 10<sup>20</sup> atoms/cm<sup>2</sup> would have been produced in just 2 million years.<sup>43</sup> This is about 500 times younger than the secular age of most granitic rocks, and more than 2,000 times younger than the evolutionary age of the Earth.

***Brand New Rocks Give Old “Ages”***

There is now a great abundance of evidence in the science literature about rocks giving ages much older than they really are. Warnings go back to the late 1960s and 1970s, but most of the scientific community is still not paying attention. Radiogenic argon and helium contents of recent basalt lava erupted on the deep ocean floor from the Kilauea volcano in Hawaii were measured. Researchers calculated up to 22,000,000 years for brand new rocks!<sup>44</sup> The problem is common (see Table 6).

Table 6: Young Volcanic Rocks with Really Old Whole-Rock K-Ar Model Ages<sup>45</sup>

<b>Lava Flow, Rock Type, and Location</b>	<b>Year Formed or Known Age</b>	<b><sup>40</sup>K-<sup>40</sup>Ar “Age”</b>
Kilauea Iki basalt, Hawaii	A.D. 1959	8,500,000 years
Volcanic bomb, Mt. Stromboli, Italy	A.D. 1963	2,400,000 years
Mt. Etna basalt, Sicily	A.D. 1964	700,000 years
Medicine Lake Highlands obsidian, Glass Mountains, California	<500 years	12,600,000 years
Hualalai basalt, Hawaii	A.D. 1800–1801	22,800,000 years
Mt. St. Helens dacite lava dome, Washington	A.D. 1986	350,000 years

The oldest real age of these recent volcanic rocks is less than 500 years. But people witnessed the molten lava solidify into most of these rocks just decades ago. In fact, many of these were only about 10 years old or less when tested. And yet  $^{40}\text{K}$ - $^{40}\text{Ar}$  dating gives ages from 350,000 to >22,800,000 years.

Potassium-Argon ( $^{40}\text{K}$ - $^{40}\text{Ar}$ ) has been the most widespread method of radioactive age-dating for the Phanerozoic rocks, where most of the fossils occur. The misdated rocks shown above violate the initial condition assumption of no radiogenic argon ( $^{40}\text{Ar}$ ) present when the igneous rock formed. However, just like the helium problem, there is too much ( $^{40}\text{Ar}$ ) present in recent lava flows, so the method gives excessively old ages for recently formed rocks. The amounts of argon in these rocks indicate they are older than their known ages. Could the argon they measured have come from a source other than radioactive potassium decay? If so, then geologists have been trusting a faulty method.

These wrong radioisotope ages violate the initial condition assumption of zero (0%) radioactive argon present when the rock formed. Furthermore, there was insufficient time since cooling for measurable amounts of  $^{40}\text{Ar}$  to have accumulated in the rock, due to the slow radioactive decay of  $^{40}\text{K}$ . Therefore, radiogenic Argon ( $^{40}\text{Ar}$ ) was *already present* in the rocks as they formed.

Radiometric age dating should no longer be sold to the public as providing reliable, absolute ages. Excess argon invalidates the initial condition assumption for potassium dating, and excess helium invalidates the closed-system assumption for uranium dating. The ages shown on the uniformitarian geologic time scale should be removed.

### ***“Young” Fossils in “Old” Mud***

The Ono Formation near Redding in northern California has been scoured by researchers and described in scientific publications for more than 140 years. Because the area has millions of fossils (including the much sought after ammonites)

and fossilized wood trapped in the same mudflow layers (which Creationists believe are from the Flood), it provides a unique opportunity for carbon dating because they were trapped by the same catastrophic event.

Dr. Andrew Snelling (Geologist) gathered four samples of ammonites and wood buried and fossilized together in the solidified mudstone in this area and sent them to the IsoTrace Radiocarbon Laboratory at the University of Toronto, Canada for dating analysis.<sup>46</sup> The results are summarized in Table 7.

Table 7. Ono Formation Radiocarbon Dating Results

<b>Dating Results from Ammonites and Wood Fossils in the Ono Formation (Snelling, 2008)</b>			
<b>Specimen</b>	<b>Rock layers</b>	<b>Ammonites</b>	<b>Wood</b>
<b>Dating (Years Before Present)</b>	112 to 120 Million (geochronologic age)	36,400 to 48,710	32,780 to 42,390

Because the ammonites and wood fossils came from a rock unit conventionally regarded as 112 to 120 million years old, the fossils are also claimed to be that old. With that supposed “age,” these fossil samples are supposedly older than the limit of the radioactive carbon (<sup>14</sup>C) method (which is less than 100,000 years). In other words, if these fossils are really over 100 million years old, then there should have been absolutely no measurable <sup>14</sup>C in them—but there was—enough to produce easily measurable ages of 32,000 to 48,000 years!

Scientists who believe in long ages assert that the ammonites and wood samples were contaminated with modern carbon in the ground, during sampling, or even in the laboratory. But this study took extensive steps to guard against such contamination. So how can 36,000 carbon-year-old ammonites and 32,000 carbon-year-old wood be stuck in a mudflow of 112 million or more conventional years? Either:

1. One of the three dates is correct and the other two are wrong.
2. All three of the dates are wrong.

If Biblical history is accurate, and we believe that it is, then the second option is the correct choice—*none of the dates are correct*. The fact that measurable  $^{14}\text{C}$  existed in the ammonites and wood fossils shows that they are very young—certainly not 112–120 million years old. But how can they still outdate the Biblical age of Creation of about 6,000 years ago? A number of factors help explain this, including the earth’s stronger magnetic field in the recent past (which changes the atmospheric  $^{14}\text{C}$  production rate), and “because the recent Genesis Flood removed so much carbon from the biosphere and buried it, the measured apparent radiocarbon ages are still much higher than the true ages of the fossil ammonites and wood.”<sup>47</sup>

Therefore, the true ages of the ammonites and wood are consistent with their burial during the Genesis Flood (about 4,300 years ago), when muddy waters washed sediments and ammonites onto this continental land.



Figure 7. Fossil Ammonites in Rock Concretions in the Ono Formation, California

Next we'll take a closer look at the reliability of Carbon dating.

### *Is Carbon Dating Reliable?*

Carbon dating assigns ages to organic materials such as wood, bone, teeth, and shells. Evolutionary researchers do not use it to age-date inorganic rocks. Recall that the way scientists use radioisotope dating is by first measuring the ratio of radioactive parent versus stable versions of an element. Carbon dating works by basing an age calculation on the ratio of radioactive carbon ( $^{14}\text{C}$ ) to normal carbon ( $^{12}\text{C}$ ) in the atmosphere before nuclear bomb testing. Carbon 14 decays to nitrogen, not carbon. Using a formula that compares that ratio, called the “percent modern carbon” or “pMC” in a sample to a standard modern pMC ratio, scientists calculate carbon ages for carbon-containing materials.

Carbon-14 doesn't decay linearly, but instead decays fast at first, then more slowly later, according to a predictable pattern that can be expressed in units called half-life. Given the short  $^{14}\text{C}$  half-life of 5,730 years, organic materials purportedly older than 100,000 years (nearly 18 half-lives) should contain absolutely no detectable  $^{14}\text{C}$ . However, coal, diamonds, and even dinosaur bones contain plenty of  $^{14}\text{C}$ .<sup>48</sup>

The process of Carbon-14 dating includes sound science—observation and repeatable methods. Further, the process uses high-tech laboratory equipment that costs millions. So the method itself is not the issue—it's the *assumptions* that are made when the “percent modern carbon” (pMC) gets converted to calendar years that carbon dating becomes unreliable and inaccurate in a number of settings. While carbon dating can in fact return somewhat accurate ages for items that are a couple thousand years old (see discussion and endnotes below), too many assumptions accompany carbon dates for items into the deeper past. Several unknown factors can seriously impact carbon ratios. Just a partial list of these factors includes:

1. **Forest fires.** Massive forest fires can change  $^{14}\text{C}/^{12}\text{C}$  ratios much in the same way that volcanic eruptions have.<sup>49</sup> Do we have a complete record of forest fires dating back thousands of years?
2. **Atomic activity/releases.** Atomic bomb testing *doubled* the amount of Carbon-14 in the 1950s and 1960s. Professor Nalini Nadkarni, an ecologist at The Evergreen State College in Washington stated that this testing caused: “a tremendous spike of Carbon-14 — actually 100 percent more Carbon-14 coming into the atmosphere than what we’d had previous to those atom bomb tests.”<sup>50</sup> Researchers have found clever ways to normalize measurements to pre-bomb levels, but this extra complications may add more uncertainty to radiocarbon-based age assignments.

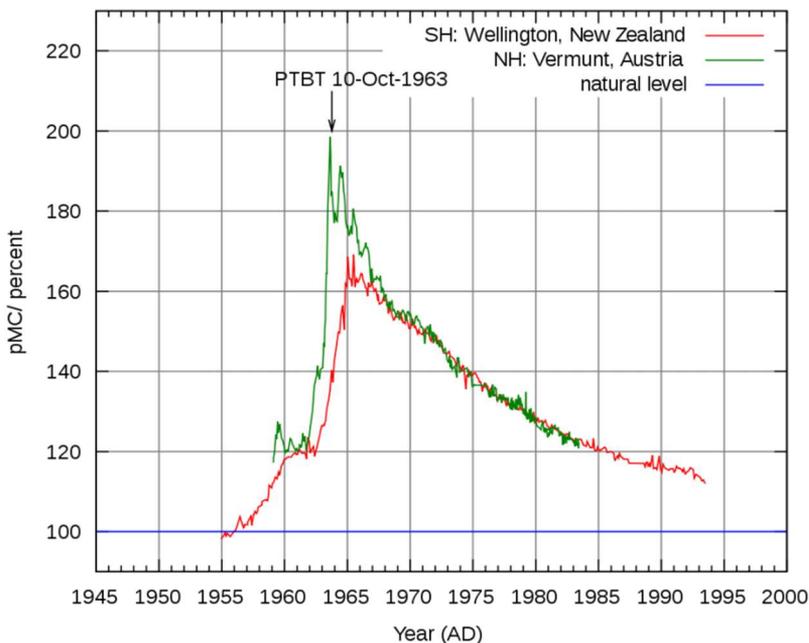


Figure 8. Effect of Atomic Bomb Testing on Carbon Dating<sup>51</sup>

3. **Volcanic eruptions.** When volcanoes erupt, they eject enormous amounts of carbon into the air. Because geological carbon does not have detectable  $^{14}\text{C}$ , the  $^{14}\text{C}/^{12}\text{C}$  ratio in the area becomes seriously disrupted—in some cases even making *living* plants appear to be 1,000 years old!<sup>52</sup> How would a recent past of high volcanism, as shown by ancient lava fields, ash falls, and dead volcanoes, have affected ancient carbon isotope ratios?
4. **Industrialization.** It is widely accepted that the mass burning of coal during the industrial revolution released an enormous amount of  $^{12}\text{C}$  into the air, which changed the  $^{14}\text{C}/^{12}\text{C}$  ratio in the atmosphere. Tree-ring studies can give some level of insight into the  $^{14}\text{C}/^{12}\text{C}$  ratio before the industrial revolution, and modern carbon dating takes this into account by running experimental measurements through a calibration formula.<sup>53</sup> But how do we know what the ratio was like thousands of years ago? We simply don't. The entire validity of the dating system hangs on these types of assumptions!<sup>54</sup>
5. **Solar flares.** Several studies have shown: 1) significant solar flares have occurred in the past, and 2) these flares have an impact on carbon levels in the atmosphere. For example, in A.D. 774–775 there was an increase of 1.2% in the  $^{14}\text{C}$  content of tree rings, which was about 20 times as high as the background rate of variation.<sup>55</sup> This “spike” was followed by a decline that lasted several years. The cause of this difference is thought to be a solar flare, as the same signal is found in  $^{14}\text{C}$  in tree rings around the world, including Germany, Russia, the United States, and New Zealand.<sup>56</sup> Other researchers have noted similar findings.<sup>57</sup> Do we know whether other solar flares like this occurred thousands of years ago?
6. **The Reservoir Effect.** Heavy or light carbon atoms can become trapped or at least concentrated in “carbon reservoirs” where carbon isotopes do not quickly

equilibrate with the atmosphere's steady level.<sup>58</sup> As a result, some modern deep ocean organics show a carbon age of 1,500 carbon years, for example. Nearby limestone can also affect carbon isotope concentrations, giving false ages—or at least ages that need even more corrections.

7. **Partial pressure.** Geologic indicators show that atmospheric CO<sub>2</sub> levels were much higher in the past.<sup>59</sup> How might this have affected the carbon isotope ratios?
8. **Magnetic field.** Extrapolated geomagnetic field decay measurements show that just several thousand years ago, Earth's magnetic field may have been twice as strong as today.<sup>60</sup> This may well have altered the rate at which cosmic radiation collides with gas particles in the upper atmosphere—the basis for <sup>14</sup>C formation.

When scientists attempt to stretch the results of carbon dating back many thousands of years, are any of these assumptions above being violated? How can we know without being there? Without written records? Carbon dating of historical objects of known age is only (somewhat) accurate back to about 1,000 B.C.<sup>61</sup> A final factor to consider when it comes to carbon dating is the worldwide Flood described in Genesis 6–9, plus the recent ice age that followed right after the Flood. Noah's Flood would have uprooted and buried entire forest systems, decreasing the release of <sup>12</sup>C into the atmosphere through the decay of vegetation. Creation scientists have looked into this, and believe the Flood explains why most dinosaur bones typically cluster between 17,850 to 49,470 radiocarbon years.<sup>62</sup>

Finally, there is a key study to consider when it comes to carbon dating: the study conducted in 1989 by the British Science and Engineering Research Council (BSERC). This study was conducted because the scientific field grew concerned about the practice of carbon dating. Many results continued to come back with varying dates for various artifacts of known ages (i.e., artifacts which could be reliably dated

using written history). So BSERC decided to conduct an *international blind test* on the practice of carbon dating itself. The test was conducted by sending dated artifacts of “known age” to 38 of the world’s leading radiocarbon testing laboratories. The results of the study were amazing.<sup>63</sup>

The British Science and Engineering Research Council (which funded the installation of the C14 apparatus at Oxford) ran a series of tests in 1989 with 38 laboratories involved worldwide. As a consequence, the council has insisted this year (1990) on new quality-control measures, by which checks are made with standard reference materials of known age. Of the mass spectrometry technique used at Oxford, Dr. Baxter reports: ‘It came out very badly in the survey, even when dating samples as little as 200 years old.’ Only 7 out of 38 laboratories produced satisfactory results, and the margin of error with artefacts of known age was two or three times greater than the technique's practitioners claim. *Nature* (the magazine which published details of the original C14 experiment) has now published a demonstration that the radiocarbon technique is not only unsound but also outdated. The Geological Observatory of Columbia University in New York has proved that the C14 results given in past years are in error by as much as 3,500 years in dating fossils, artefacts and events of the past 40,000 years, and the further back we go in time, the greater the error. Dr. Fairbanks of the observatory staff points out that since the C14 dating depends on the ever-variable quantity of C14 in the atmosphere produced by cosmic rays, any alteration of that production either by nature, or by the solar system, or by man-made interference

(such as thermo-nuclear bombs) must cause a collapse of the whole hypothesis. He quotes the significant underestimation of the age of ancient objects and states that in a large number of tests C14 failed consistently, the samples being far older than the C14 findings showed.

How can carbon dating be regarded as scientifically reliable and accurate when 0 of 38 laboratories “achieved a correct date, even with plus or minus tolerances, and many were off by *thousands of years*”? Do we know about all of the forest fires and volcanic eruptions that have occurred in the distant past? Atomic activity? Solar flares and cycles? Earth’s magnetic field? There are so many assumptions required to journey into the distant past—it’s a better idea to trust the Creator for our past, and not secular science.

### ***Coal Deposits Are Young***

Astonishing discoveries over the past 30 years come from highly sensitive Accelerator Mass Spectrometer (AMS) methods used to test organic samples show measurable amounts of <sup>14</sup>C from every portion of the fossil-bearing rock layers all around North America (see Table 8).

Table 8: Carbon in Coal Deposits<sup>64</sup>

<b>Coal Seam Name</b>	<b>Location</b>	<b>Geologic Interval of Deposition</b>	<b><sup>14</sup>C/C (pMC)</b>
Bottom	Freestone County, TX	Eocene	0.30
Beulah	Mercer County, ND	Eocene	0.20
Pust	Richland County, MT	Eocene	0.27
Lower Sunnyside	Carbon County, UT	Cretaceous	0.35

Blind Canyon	Emery County, UT	Cretaceous	0.10
Green	Navajo County, AZ	Cretaceous	0.18
Kentucky #9	Union County, KY	Pennsylvanian	0.46
Lykens Valley #2	Columbia County, PA	Pennsylvanian	0.13
Pittsburgh	Washington County, PA	Pennsylvanian	0.19
Illinois #6	Macoupin County, IL	Pennsylvanian	0.29

The percentage of modern carbon (pMC) ranges (0.10–0.46) in the coal seams corresponds to radiocarbon ages roughly from 40,000 to 60,000 carbon years. But the conventional interval from the bottom of the Pennsylvanian layers to the top of the Eocene layers spans many millions of years, from 318,000,000 to 34,000,000 years. So which age are we supposed to believe, that coal is hundreds of millions, tens of millions, or only tens of thousands of years old? Maybe all are wrong.

Furthermore,  $^{14}\text{C}/\text{C}$  ratios have about the same average amount of pMC regardless of the supposed geologic ages assigned to them. For Pennsylvanian coal, the average is 0.27; for Cretaceous coal, the average is 0.21; and for Eocene coal, the average is 0.26. These all show about the same pMC. What might this consistency indicate? It looks like the plant debris that eventually became coal was uprooted or died at about the same time. There is no doubt that the tectonic upheaval that occurred during Noah’s Flood did this when the fountains of the great deep ruptured according to Genesis 7:11. The dead plant debris then floated and sank at different weeks during the Flood and in some number of years afterwards as geologic processes of the Earth steadily stabilized. As a result of this cataclysmic Flood, continuous deposition of huge amounts of sediments

compressed the plant debris into coal seams in various stratigraphic levels.

Not only have scientists discovered young-looking, still radioactive carbon in coal, but also in fossils including wood, amber, dinosaur bones, and other Earth materials like the one we will discuss next.

### ***Diamonds Are Forever Young***

Equally as remarkable as radioactive carbon in coal is the presence of  $^{14}\text{C}$  in diamonds. Diamonds are almost purely carbon. These gorgeous crystals and the mineral inclusions trapped inside them when they grew give evidence that they formed at great depths. Based on the types of mineral inclusions, diamonds now sampled and mined at or near the Earth's surface originated under extreme temperatures and pressures deep within the Earth, at depths from around 200 km to over 1000 km.<sup>65</sup>

Recently, researchers discovered isotopically light organic carbon in diamonds. This means that the carbon originated by photosynthesis on the Earth's surface. The organic carbon from some living things (maybe algae?) that died ended up on the ocean floor, and was then subducted along with oceanic crust, diving deep into the mantle far below earth's surface. The authors of one technical study wrote that "subducted organic carbon can retain its isotopic signature even into the lower mantle."<sup>66</sup> They estimate that the diamonds formed at a depth of about 1000 km (600 miles) or so based on mineral inclusions within them (see Table 9). How did (probably) algae get so far down?

When the Flood violently destroyed earth's surface, it dragged all kinds of materials down below the surface. Then, mainly during the later Flood stages when it deposited Cretaceous System sediments, explosive eruptions all around the world brought diamonds up from these great deep places back to the Earth's surface through kimberlite pipes. Even some jewelry television commercials assert the whole process takes

about a billion years or so. But like coal, diamonds that old should not have any detectable Carbon-14.

Table 9: Carbon in Diamonds from Kimberlite Pipes<sup>67</sup>

<b>Kimberlite Pipe</b>	<b>Location</b>	<b>Geologic Interval of Eruption</b>	<b><sup>14</sup>C/C (pMC)</b>
Kimberley-1	Kimberley, South Africa	Cretaceous	0.02
Orapa-A	Orapa mine, Botswana, Africa	Cretaceous	0.01
Orapa-F	Orapa mine, Botswana, Africa	Cretaceous	0.03
Letlhakane-1	Letlhakane mine, Botswana, Africa	Cretaceous	0.04
Letlhakane-3	Letlhakane mine, Botswana, Africa	Cretaceous	0.07

Diamonds from five different mines in Africa were studied (Table 9). These diamonds contain measurable radioactive carbon-14 with an average of 0.03–0.04 pMC, which equates to roughly 65,000 radiocarbon years.<sup>68</sup> These diamonds were supposed to have formed long before the Cretaceous eruption, supposedly 145,500,000 years ago. The 65,000-year period is a tiny fraction of the imaginary inflated age of 145,500,000 years. Radioactive carbon in pre-Cretaceous diamonds clearly refutes the millions-of-years age assignment for Cretaceous materials as well as the supposed billion years to make diamonds.

***Fresh Tissue in Old Rocks***

Recent discoveries of fresh-looking tissues within Montana dinosaur fossils and young-looking proteins in fossils all around the world surprise paleontologists who assume that Earth’s fossil-containing strata formed over millions of years. If

the rock layers are really millions of years old, then fresh proteins, DNA, and cells should no longer exist.

In the Yunnan Province, China, researchers discovered protein in sauropod dinosaur embryos found in fossil eggs supposedly 190,000,000 years old. These proteins don't even last one million years. The presence of apatite, the mineral component that vertebrate animals and man manufacture into bone, found interwoven with embryonic bone tissue proves that the protein originated from organic matter directly from the dinosaurs.<sup>69</sup>

Exceptionally preserved sauropod eggshells discovered in Upper Cretaceous deposits in Patagonia, Argentina, contain young-looking proteins from embryonic titanosaurid dinosaurs. Since these original dinosaur proteins decay very rapidly, the scientists involved in the study imagined that “virtually instantaneous mineralization of soft tissues” (mineralization occurs when the bone material is replaced by minerals from the soil) somehow preserved them for millions of years.<sup>70</sup>

Mineralization may have been rapid enough to encapsulate fragments of original biomolecules in these specimens.

Retaining is reasonable, but calling upon mineralization to preserve proteins for millions of years has no scientific basis since all experiments show even encapsulated proteins would decay in fewer than about a million years if kept cold. Their results demonstrate that organic compounds and other biological structures still look similar to those found in modern eggshells, showing that perhaps only thousands of years have elapsed since the dinosaur eggs were catastrophically buried by flood sediments.

In addition to these two examples, dozens of discoveries have been reported in several scientific journals, primarily from the 1990s to the present. Here are a few of the incredible fresh finds along with their conventional ages in millions of years (MY):

- Salamander muscle, 18MY
- Intact soft Frog with bloody bone marrow, 10MY

- Ichthyosaur skin, 190MY
- Hadrosaur blood vessels, 80MY
- *Archaeopteryx* feather proteins, 150MY
- Mosasaur blood protein fragments, >65MY
- Penguin feathers, 36MY
- Scorpion shell including shell protein, 240MY
- Psittacosaurus skin, 125MY
- DNA from Hadrosaur bone cell nuclei, 65MY
- Lizard tail skin proteins, 40MY
- Type I collagen proteins (and whole connective tissues including elastin and laminin) from Tyrannosaurus Rex and Hadrosaur dinosaurs<sup>71</sup>

Think about this list for a moment. The idea that a frog, still soft with still-bloody-red colored bone marrow, is 10,000,000 years old is preposterous. First of all, just to preserve soft body parts requires rapid burial. And a volcanic eruption buried this Spanish frog in an ash deposit, partly baking its skin. But even when buried in sediments, can fresh meat such as a soft frog, skin, proteins, blood, muscle tissue, and possibly DNA really last for millions of years? Almost all the relevant laboratory decay studies demonstrate otherwise. The truth is that proteins, even locked inside bone tissue, have a maximum shelf life between 200,000 to 700,000 years in an optimal burial environment at 10 degrees C, and DNA molecules in bone are estimated to be undetectable after about 10,000 years at similar temperatures.<sup>72</sup> Genuine, original body molecules and tissues show that fossils are maybe thousands, but not millions of years old. Is any of this scientific data in today's biology textbooks?

### ***The Young Ocean***

Evolutionists believe the ocean to be 3,000,000,000 years—that's 3 billion years—old. But sodium (Na<sup>+</sup>) content of the ocean has steadily increased. The processes which add and remove dissolved sodium to and from seawater have been well

known for many decades (Table 10). Scientists can use this data to estimate maximum age ranges for oceans.

Table 10: Present Day Sodium Inputs and Outputs of Sodium to/from the Oceans<sup>73</sup>

Sodium (Na+) Added to the Ocean		Sodium (Na+) Removed from Ocean	
Process	Amount x 10 <sup>10</sup> kg/year	Process	Amount x 10 <sup>10</sup> kg/year
Rivers	19.2	Sea Spray	6.0
Ocean Sediments	11.5	Cation Exchange	3.5
Groundwater from Continents	9.6	Burial of Pore Water in Sea Floor Sediments	2.2
Glacial Activity	4.0	Alteration of Basalt	0.44
Sea Floor Vents	1.1	Zeolite formation	0.08
Atmosphere, Volcanism, Marine Coastal Erosion	0.3	Halite Deposition	<0.004
<b>Total Input Rate</b>	<b>45.7</b>	<b>Total Output Rate</b>	<b>12.2</b>

Known removal processes can account for only about 1/4 (12.2/45.7) of the present amount of sodium added to the ocean. This indicates that the sodium concentration of the ocean is not in equilibrium, but continues to increase. We calculate the increase in sodium by subtracting output (12.2) from input (45.7). This equals 33.5 x 10<sup>10</sup> kg/year (Table 10). How can this much added salt fit a 3-billion-year-old ocean? The enormous imbalance shows that the ocean should contain much more salt if it is really that old.

In 1990, the total amount of sodium in the ocean was estimated at 1.47 x 10<sup>19</sup> Kg. The present-day increase of sodium to the oceans is 3.35 x 10<sup>11</sup> kg/year (same as 33.5 x 10<sup>10</sup> in above paragraph). If we begin with zero sodium—an ocean of pure fresh water—then the time to fill the ocean with sodium is 1.47 x 10<sup>19</sup> / 3.35 x 10<sup>11</sup> kg/year = 43,880,597 years or about 44 million years. This can be stretched to a maximum age of 62

million years when reduced input rates and maximum output rates are used.

But this does not mean the ocean is 44 to 62 million years old. The maximum age of 62 million years assumes that the ocean started as fresh water with 0% sodium and with no global catastrophic additions of sodium. The ocean must be much younger than this since most ocean creatures need at least a little salt in their environment. Also, our calculation ignores the Flood, which would have greatly accelerated erosion.

Just like sodium, rivers carry most of the sediments eroded from the continents into the ocean basins. The worldwide average depth of all the sediments on the seafloor is less than 1200 feet. More than 24,000,000,000 metric tons runs into the oceans each year. Only 1,000,000,000 tons of these deposits are dragged below the crust by tectonic plate subduction each year, which equates to 23,000,000,000 metric tons that accumulate on the seafloor. At this present rate, all these sediments would accumulate in only about 12,000,000 years into an empty ocean.<sup>74</sup>

Since the ocean is not likely to have begun as pure fresh water, the maximum age of 62,000,000 years based on salt content has been reduced to 12,000,000 years based on sediment input. But 12,000,000 years represents a maximum age limit because this assumes a completely empty ocean at the start and is based on present rates of deposition from the rivers. In any case, conventional age assignments exceed even these old age estimates.

In the Biblical Creation model, perhaps most of the sodium was added to the ocean by rapid geologic processes during creation week. Possibly this supported the first marine life. God created the oceans on Day 3 to be inhabited on Day 5. Later, Noah's Flood rapidly dumped who knows how much salt and sediment from its reworked continents into the ocean.

All the world's ocean floors look very young. They most likely resulted from catastrophic plate tectonic activity during the Flood.<sup>75</sup> When the floodwaters rapidly drained off the surfaces of emerging continents, erosion and sedimentation

would have dwarfed present rates. Water and sediments racing back toward the new and deeper ocean basins started much during this receding process. In addition, perhaps more than a dozen “megafloods,” like the one that carved the English Channel and another that carved Washington State’s Snake River basin, catastrophically drained to quickly add more sediment during the post-Flood Ice Age. These events elevated sea level by 300 or so feet worldwide as tremendous ice sheets and glaciers melted over several centuries. Eventually erosion rates stabilized into the river sedimentation observed today. Thus, all the sediments on the ocean floor accumulated in just a few to several thousand years ago, since the Flood.

### ***Summary of Young Earth Evidence***

Why don’t standard school textbooks include these solid scientific reasons and observations that refute conventional age assignments? Perhaps some scientists ignore the evidence for recent creation not because it’s unscientific, but because they are simply unwilling to admit they are wrong, or unwilling to face the idea that there really hasn’t been enough time for evolution to have occurred. Other reasons exist, but they are all poor excuses for excluding these many solid reasons for a recent creation.

Interpretation of radiometric age dating by many in the scientific community has drastically inflated the age of the Earth. Old radioisotope ages assigned to newly formed rocks diminishes those techniques’ reliability as “age” indicators. If it cannot be trusted for young rocks, then how can it be trusted for ones that are supposedly old? Two minerals, zircon and diamonds, are about as close to a closed system as we can imagine. And yet, zircon crystals contain too much helium, plus the atmosphere does not have enough to support the idea of an Earth that is billions or even millions of years old. Measurable amounts of Carbon-14 in diamonds demonstrate that the Earth is only thousands of years old. Carbon-14 in coal of supposedly different ages indicates that the plant debris really lived in the

same time period—what Biblical Creationists call the pre-Flood age. This is further demonstrated by the fact that the coals were not only sampled from different stratigraphic levels but also from widely separated locations. The consistency of the data and care with which they were acquired rule out contamination as an excuse.

The Carbon-14 ages of 40,000 to 65,000 years for various deeply-buried coals refute their conventional age assignments. But the Earth can even be younger than this—especially when we take into account possible inputs of carbon into the atmosphere during the Flood (e.g., volcanic eruptions, modern industry, forest fires, etc.). Fossils and fossil fuels demonstrate that the original Earth at the time of creation contained many more living things than today. The Flood and its aftereffects buried much of it. This large biomass—the total contribution of life to Earth’s mass—was probably 100 times greater than the total biosphere of living plants and animals today. This would have caused a much lower percent modern carbon (pMC) ratio of  $^{14}\text{C}/\text{C}$ , allowing us to reduce the calculated carbon ages to just several thousand years, which is more consistent with Scripture.<sup>76</sup>

This young age for the Earth matches quite well with the produced helium within the zircon crystals forming in about 6,000 years. Similarly, DNA’s known decay rate limits it to within 10,000 years, but signs of DNA occur even in dinosaur bones. These ages also match well with the recorded histories of mankind, the population growth rate of mankind extrapolated into the past, and the chronology in the Bible.